

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1-38. (Canceled).
39. (New) A nitride semiconductor structure comprising:
a p-type base layer exposed by etching; and
a semiconductor layer regrown on said p-type base layer exposed by etching,
wherein said semiconductor layer comprises:
an indium-containing p-type nitride semiconductor layer, which is
regrown on a surface of said p-type base layer.
40. (New) The nitride semiconductor structure according to claim 39, wherein said
indium-containing p-type nitride semiconductor layer is p-type InGaN.
41. (New) The nitride semiconductor structure according to claim 40, wherein said p-
type base layer is p-type InGaN.
42. (New) The nitride semiconductor structure according to claim 40, wherein said p-
type InGaN base layer has an indium mole fraction of 5 - 30%.
43. (New) The nitride semiconductor structure according to claim 40, wherein said p-
type nitride semiconductor layer has an indium mole fraction higher than an indium mole
fraction of said p-type InGaN base layer.
44. (New) The nitride semiconductor structure according to claim 39, wherein said p-
type base layer is p-type InGaN.

45. (New) The nitride semiconductor structure according to claim 44, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.

46. (New) The nitride semiconductor structure according to claim 44, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than an indium mole fraction of said p-type InGaN base layer.

47. (New) The nitride semiconductor structure according to claim 39, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.

48. (New) The nitride semiconductor structure according to claim 47, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than an indium mole fraction of said p-type InGaN base layer.

49. (New) The nitride semiconductor structure according to claim 39, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than an indium mole fraction of said p-type InGaN base layer.

50. (New) A nitride semiconductor structure comprising on a substrate:
an n-type collector layer;
a p-type base layer formed on said n-type collector layer; and
an n-type emitter layer formed on said p-type base layer, wherein
a surface of said p-type base layer, which is exposed by etching said n-type emitter layer, is provided with an indium-containing p-type nitride semiconductor layer, which is regrown on said surface.
51. (New) The nitride semiconductor structure according to claim 50, wherein said p-type nitride semiconductor layer is p-type InGaN.
52. (New) The nitride semiconductor structure according to claim 51, wherein said p-type base layer is p-type InGaN.
53. (New) The nitride semiconductor structure according to claim 51, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.
54. (New) The nitride semiconductor structure according to claim 51, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than an indium mole fraction of said p-type InGaN base layer.
55. (New) The nitride semiconductor structure according to claim 50, wherein said p-type base layer is p-type InGaN.
56. (New) The nitride semiconductor structure according to claim 55, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.
57. (New) The nitride semiconductor structure according to claim 55, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than an indium mole fraction of said p-type InGaN base layer.

58. (New) The nitride semiconductor structure according to claim 50, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.

59. (New) The nitride semiconductor structure according to claim 58, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than an indium mole fraction of said p-type InGaN base layer.

60. (New) The nitride semiconductor structure according to claim 50, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than an indium mole fraction of said p-type InGaN base layer.

61. (New) A nitride semiconductor bipolar transistor comprising on a substrate:
an n-type collector layer;
a p-type base layer comprising a p-type nitride semiconductor, formed on the n-type collector layer; and
an n-type emitter layer formed on said p-type base layer, wherein
a surface of said p-type base layer, which is exposed by etching said n-type emitter layer, is provided with an indium-containing p-type nitride semiconductor layer, which is regrown on said surface.
62. (New) The nitride semiconductor bipolar transistor according to claim 61, wherein said p-type nitride semiconductor layer is p-type InGaN.
63. (New) The nitride semiconductor bipolar transistor according to claim 62, wherein said p-type base layer is p-type InGaN.
64. (New) The nitride semiconductor bipolar transistor according to claim 62, further comprising a graded layer between said p-type base layer and said n-type collector layer, said graded layer has its indium mole fraction varied gradually.
65. (New) The nitride semiconductor bipolar transistor according to claim 62, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.
66. (New) The nitride semiconductor bipolar transistor according to claim 62, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than the indium mole fraction of said p-type InGaN base layer.
67. (New) The nitride semiconductor bipolar transistor according to claim 61, wherein said p-type base layer is p-type InGaN.

68. (New) The nitride semiconductor bipolar transistor according to claim 67, further comprising a graded layer between said p-type base layer and said n-type collector layer, said graded layer has its indium mole fraction varied gradually.

69. (New) The nitride semiconductor bipolar transistor according to claim 67, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.

70. (New) The nitride semiconductor bipolar transistor according to claim 67, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than the indium mole fraction of said p-type InGaN base layer.

71. (New) The nitride semiconductor bipolar transistor according to claim 61, further comprising a graded layer between said p-type base layer and said n-type collector layer, said graded layer has its indium mole fraction varied gradually.

72. (New) The nitride semiconductor bipolar transistor according to claim 71, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.

73. (New) The nitride semiconductor bipolar transistor according to claim 71, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than the indium mole fraction of said p-type InGaN base layer.

74. (New) The nitride semiconductor bipolar transistor according to claim 61, wherein said p-type InGaN base layer has an indium mole fraction of 5 - 30%.

75. (New) The nitride semiconductor bipolar transistor according to claim 74, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than the indium mole fraction of said p-type InGaN base layer.

76. (New) The nitride semiconductor bipolar transistor according to claim 61, wherein said p-type nitride semiconductor layer has an indium mole fraction higher than the indium mole fraction of said p-type InGaN base layer.